

Amendments to the Claims

The following is a complete listing of the claims that replaces all previous versions:

Claims 1-67 cancelled.

68. (Currently Amended) A polymerization process, comprising:

initiating a first polymerization of monomers using an multifunctional initiator functionalized with an ATRP initiating site and a second initiation site for initiating the first polymerization, wherein the first polymerization is selected from the group of cationic polymerization, anionic polymerization, conventional free radical polymerization, metathesis, ring opening polymerization, cationic ring opening polymerization, and coordination polymerization to form a macroinitiator comprising an ATRP initiating site; and initiating an ATRP polymerization of radically polymerizable monomers using the macroinitiator comprising an ATRP initiating site.

69. (Original) The polymerization process of claim 68, wherein the first polymerization of monomers is a conventional radical polymerization and the initiator functionalized with an ATRP initiating site is at least one of functionalized azo compounds and peroxides.

70. (Original) The polymerization process of claim 68, wherein the first polymerization of monomers is a one of a cationic polymerization, anionic polymerization and a conventional radical polymerization and the initiator functionalized with an ATRP initiating site is a functionalized transfer agent.

71. (Currently Amended) The polymerization process of claim 68, wherein the first polymerization of monomers is a cationic ring opening polymerization and

the multifunctional initiator functionalized with an ATRP initiating site is one of a 2-halopropionyl halide/silver and 2-haloisobutyronyl halide/silver salt.

72. (Currently Amended) The polymerization process of claim 71, wherein the multifunctional initiator functionalized with an ATRP initiating site is 2-bromopropionyl bromide/silver triflate.

73. (Currently Amended) The polymerization process of claim 68, wherein the first polymerization of monomers is one of a cationic polymerization and ring opening polymerization and the multifunctional initiator functionalized with an ATRP initiating site is one of a 2-halopropionyl halide and 2-haloisobutyronyl halide.

74. (Currently Amended) The polymerization process of claim 73, wherein the multifunctional initiator functionalized with an ATRP initiating site is 2-bromopropionyl bromide.

75. (Currently Amended) The polymerization process of claim 68, wherein the first polymerization of monomers is a conventional radical polymerization and the multifunctional initiator functionalized with an ATRP initiating site is at least one of halogenated AIBN derivatives and halogenated peroxide derivatives.

76. (Currently Amended) The polymerization process of claim 68, wherein the first polymerization of monomers is an anionic polymerization and the multifunctional initiator functionalized with an ATRP initiating site comprises ing hydroxy functionality.

77. (Currently Amended) The polymerization process of claim 76, wherein the multifunctional initiator functionalized with an ATRP initiating site is 2-hydroxyethyl 2-bromopropionate.

78. (Original) A polymerization process, comprising:

initiating a first polymerization of monomers using an initiator, wherein the first polymerization is selected from the group of cationic polymerization, anionic polymerization, conventional free radical polymerization, metathesis, ring opening polymerization, cationic ring opening polymerization, and coordination polymerization to form a macromolecule;

quenching the first polymerization with a compound comprising an ATRP initiating site to form a macroinitiator comprising the macromolecule and an ATRP initiating site; and

initiating an ATRP polymerization using the macroinitiator comprising an ATRP initiating site.

79. (Original) The polymerization process of claim 78, wherein the first polymerization of monomers is a ring opening polymerization of cyclic hexamethylcyclotrisiloxane and the compound comprising an ATRP initiating site is 4-(chlorodimethylsilylethyl)styrene.

80. (Original) The polymerization process of claim 78, wherein the macromolecule is a polyphosphazene.

81. (New) A polymerization process, comprising:

initiating a first polymerization of monomers using an initiator functionalized with an ATRP initiating site to form a macroinitiator comprising an ATRP initiating site; and

initiating an ATRP polymerization of radically polymerizable monomers using the macroinitiator comprising an ATRP initiating site, wherein the first polymerization of monomers is a conventional radical polymerization

and the initiator functionalized with an ATRP initiating site is at least one of functionalized azo compounds and peroxides.

82. (New) A polymerization process, comprising:

initiating a first polymerization of monomers using an initiator functionalized with an ATRP initiating site to form a macroinitiator comprising an ATRP initiating site; and

initiating an ATRP polymerization of radically polymerizable monomers using the macroinitiator comprising an ATRP initiating site, wherein the first polymerization of monomers is a cationic ring opening polymerization and the initiator functionalized with an ATRP initiating site is one of a 2-halopropionyl halide/silver and 2-haloisobutyronyl halide/silver salt.

83. (New) The polymerization process of claim 82, wherein the initiator functionalized with an ATRP initiating site is 2-bromopropionyl bromide/silver triflate.

84. (New) A polymerization process, comprising:

initiating a first polymerization of monomers using an initiator functionalized with an ATRP initiating site to form a macroinitiator comprising an ATRP initiating site; and

initiating an ATRP polymerization of radically polymerizable monomers using the macroinitiator comprising an ATRP initiating site, wherein the first polymerization of monomers is a conventional radical polymerization and the initiator functionalized with an ATRP initiating site is at least one of halogenated AIBN derivatives and halogenated peroxide derivatives.

85. (New) A polymerization process, comprising:

initiating a first polymerization of monomers using an initiator functionalized with an ATRP initiating site to form a macroinitiator comprising an ATRP initiating site; and

initiating an ATRP polymerization of radically polymerizable monomers using the macroinitiator comprising an ATRP initiating site., wherein the first polymerization of monomers is an anionic polymerization and the initiator functionalized with an ATRP initiating site comprises hydroxy functionality.

86. (New) The polymerization process of claim 85, wherein the initiator functionalized with an ATRP initiating site is 2-hydroxyethyl 2-bromopropionate.